



Ministry of Education and Science of Ukraine

**ODESA STATE ACADEMY OF CIVIL
ENGINEERING AND ARCHITECTURE**

Architectural-Art Institute
Department of Architecture of Buildings and Structures
Department of Urban planning

**SYLLABUS
of educational component - OK 4**

educational discipline **CONCEPTUAL ARCHITECTURAL DESIGN**

Educational level	Second (master's)	
Training program	Compulsory	
Branch of knowledge	19	Architecture and civil engineering
Specialty	191	Architecture and urban planning
Education program	Educational and scientific program «Architecture of Buildings and Structures »	
Scope of discipline	22,5 credits ECTS (675 academic hours)	
Types of classes activities	Practical lessons	
Individual and (or) group lessons	1 semester	Abstract. Course project
	2 semester	Abstract. Course project
	3 semester	Abstract. Course project
Forms of semester control	1 semester	Credit
	2 semester	Credit
	3 semester	Credit

Teachers:

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In the process of studying this discipline, students get acquainted with the methodology and features of designing public, residential, industrial and urban planning objects. Students acquire skills in designing, for example, large spectacular buildings (theatre, concert hall), high-rise residential buildings, neighborhoods and residential blocks, factories and plants.

The prerequisites for studying the discipline are the preliminary study of the bachelor's training program of the disciplines "Architectural design", "Typology of buildings and structures", "Fundamentals of urban planning", "Computer technologies in architectural design", "Architectural constructions", "Construction of buildings and structures", "Engineering equipment of buildings".

Program learning rezaltes

LR01. Have specialized conceptual knowledge that includes modern scientific achievements in the field of architecture and urban planning and is the basis for original thinking and conducting research.

LR 02. Have the specialized skills/problem-solving skills necessary to conduct research and/or conduct innovative activities in the field of architecture and urban planning in order to develop new knowledge and procedures.

LR 03. Carry out pre-project analysis of architectural and urban planning objects and territories.

LR 04. To understand and apply in practical activities the theoretical and practical principles of designing innovative urban planning objects, residential, public, industrial buildings and structures, reconstruction and restoration of architectural objects, methods of achieving a rational architectural and planning, volume-spatial, constructive solution, ensuring socio-economic efficiency, environmental friendliness, energy efficiency.

LR 05. Know, understand and evaluate the characteristics of modern construction materials, products and technologies, take into account their features when developing innovative design solutions for buildings and structures, in urban and landscape improvement projects, during the reconstruction and restoration of architectural and urban planning monuments.

LR 06. To ensure the harmonization of architectural objects and the subject environment, in particular with the application of the principles and methods of the design theory of the architectural environment.

LR 07. Carry out project modeling, choose digital technologies and software tools for solving problems of a research and innovation nature, develop and implement projects in the field of architecture and urban planning, prepare relevant scientific and technical documentation, make models and visual illustrative materials.

LR 08. Organize work on complex architectural and urban planning projects, cooperation with customers and the public in the development, coordination and public discussion of architectural projects; it is understandable to convey one's own conclusions and arguments to specialists and non-specialists.

LR 09. Apply energy-efficient and other innovative technologies when conducting scientific architectural and urban planning studies and making complex architectural and urban planning decisions.

LR 10. Discuss the results of professional activities, research and innovative projects in the field of architecture and urban planning in national and foreign languages orally and in writing.

LR 11. Make effective decisions in the field of architecture and urban planning, develop and compare alternatives, consider limitations, assess possible side effects and risks.

LR 12. Know and apply in practice the legislation and regulatory framework regarding the conduct of research and development of architectural and urban planning projects.

LR 13. To substantiate safety, sanitary-hygienic, ecological, engineering-technical and technical-economic solutions and indicators in complex architectural and urban planning.

LR 14. To supervise the implementation of projects in the field of architecture and urban planning.

LR 15. Analyze international and domestic experience in the design of architectural objects and urban planning.

LR 16. Plan and carry out scientific research in the field of architecture and urban planning.

LR 17. To teach special educational disciplines in architecture and urban planning in institutions of higher education.

LR 18. To determine the methods of realization of a creative task taking into account the solution of complex architectural-artistic, functional-planning and constructive-technological tasks. Achieve the completion of all stages and stages of architectural and urban planning, the development of all sections of the complex project and the explanatory note within the set deadline.

LR 19. Conduct an analysis of the urban historical context of the environment; apply the acquired theoretical knowledge on the problems of reconstruction and renovation of historical buildings in the development of architectural and urban planning project documentation; use optimal solutions in the field of reconstruction of urban areas and architectural objects.

Differentiated learning outcomes:

According to the requirements of the educational and professional program, students must

know:

- methods of implementation of a creative task, sequence and rules of implementation of project documentation;
- theoretical and practical foundations of urban design of complex development of residential areas, microdistricts (quarters);
- problems and methods of effective resolution of conflict situations in the formation of rural areas of the city;
- basics of aesthetic perception of the environment;
- features and directions of rational territorial development of the city;
- the principles of using specific architectural and planning potential;

be able to:

- apply basic design methods to effectively solve a creative problem;
- collect, classify information for the project task;
- develop project documentation of the main types;
- develop projects of public, residential, industrial, urban planning, landscape objects, interiors, small architectural forms, etc.;
- to possess the methodology of functional zoning of the territory taking into account zones of different ranks (main, city-wide, district, local) and the formation of the street network of residential areas, taking into account the main directions of urban transport attraction in the city;
- independently apply design methods and regulatory requirements to the territorial and spatial structure of residential areas, microdistricts (quarters); to form a comfortable urban environment taking into account the full range of institutions and service enterprises;
- to develop the architectural and town-planning composition of the residential microdistrict, its functional basis, taking into account fire prevention, sanitary and hygienic requirements and environmental protection; to have a methodology for calculating the population density of residential quarters (residential group) with a full range of city services;
- to create an aesthetically attractive landscape design of residential areas of residential groups;
- apply modern technical means, elements of computer design in architectural design;
- work with specialists in related fields;
- to carry out partial author's supervision of the summary of designed objects;
- prepare materials for drawing up an estimate.

Thematic plan of practical lessons

№p/p	Names of themes	Number of hours	
		practical lessons	independent work
1	2	3	4
	1 semester		
	Course project №1 Development of a project of an industrial building with complex functional-technological and structural schemes. The options are a bakery, a cannery, a spinning and weaving factory, an auto assembly plant and a science and technology park (performed by the Department of Architecture of Buildings and Structures)		
1.1	Issuance of the task. Compilation of an essay on the architectural organization of enterprises in the chosen field. Study of the technological structure of the enterprise.	12	10
1.2	Site selection. Closed work No. 1 "Enterprise Placement Scheme". Discussion of closed works, preparation of an essay, search for an idea of an architectural and spatial solution of the enterprise.	12	10
1.3	Submitting an essay. Closed work No. 2 "Architectural and spatial solution of the enterprise." Discussion of closed works. Clarification of the situational scheme, technological scheme, general plan.	14	14
1.4	Development of variants of production building sketches. Sketching according to the general plan and production building. Approval of sketches of the general plan and production building.	30	30
1.5	Closed work No. 3 "Administrative and household building". Discussion of closed works. Sketching of the administrative and household building.	28	28
1.6	Approval of the project. Drafting of the project. Designing the exposition, drawing up an explanatory note. Exhibition of finished projects. Evaluation and discussion of works.	18	19
	Together in the 1-st semester	114	111
	2 semester		
	Course project №2 Task 1. Development of a project for the planning and development of a residential microdistrict (block) for 15-20 thousand residents (performed by the Department of Urban Planning)		

	Section 1. Collection of initial information on the design of a residential area, microdistrict (block) and pre-project analysis. Preparatory stage.		
2.1	Studying the conditions of the project task. Site selection. Collection of materials (geosurveying, photofixation of the site). Study of normative and reference literature. Analysis of modern global design experience.	6	6
2.2	Pre-project studies. Calculation of the balance of the territory of the district. Development of a scheme for the organization of public services in the district; placement of city transport stops. Identification of key design problems of similar objects, analysis of the planning of transport and pedestrian routes.	6	6
2.3	Calculation of the balance of the territory of a residential microdistrict (block) - determination of the area for residential buildings and parking lots (taking into account its estimated number of floors); plots of enterprises and public service institutions, engineering structures and green spaces.	4	6
	Section 2. Sketch development of the planning and development of a residential microdistrict (block). Performance of creative situational exercises (clausure). Stage of creative search.		
2.4	Development of options for functional zoning of the territory of a residential microdistrict (block) taking into account the public service system.	10	10
2.5	Development of options for the volume-spatial solution of a residential microdistrict (block) based on the accepted functional zoning of the district.	10	10
2.6	Development of development plans for a residential microdistrict (block) based on the adopted version of the volume-spatial solution.	4	4
	Section 3. Designing the graphic and text part of the sketch project of planning and development of a residential microdistrict (quarter). Stage of creative development and graphic execution.		
2.7	Clarification and detailing of the architectural and planning solution of a residential microdistrict (block). Implementation of the working layout.	8	10
2.8	Development of composition sketches and implementation of the graphic part of the project (in computer graphics).	6	6

	Section 4. Sketch development of the planning structure of the residential group. Performance of creative situational exercises (clausure).		
2.9	Collection of initial information for the design of a residential group with the development of landscaping of the surrounding area. Analysis of modern trends in the design of similar objects.	4	6
2.10	Pre-project analysis. Development of variants of the volume-spatial solution of the elements of the residential group. Harmonization of the system of pedestrian and transport traffic, taking into account the category of the population with disabilities. Development of options for aesthetically attractive sustainable landscape design of the residential area of the residential group.	10	12
	Section 5. Designing the graphic and textual part of the sketch project for the improvement of the residential area of the residential group.		
2.11	Clarification and detailing of the architectural and planning decision of the residential group, equipment of the territory.	6	6
2.12	Designing the graphic and text part of the project.	6	6
	Total for task 1	80	90
	Course project №2 Task 2. Development of a project of a multi-storey residential building. Variants – sectional house, gallery-type house and others (performed by the department of architecture of buildings and structures)		
2.13	Issuance of the task. Introductory conversation, familiarization with real projects, examples of student projects. Issuance of the outline of the essay. Closed work "Architectural and planning solution of a multi-storey residential building with a stair-elevator complex".	8	8
2.14	Discussion of closed works. Essay writing. Search for the idea of an architectural and planning solution.	8	10
2.15	Preparation and submission of the essay. Sketching according to plans, facades, sections of a residential building. Approval of sketches. Development of an apartment plan with the arrangement of furniture and equipment.	16	18

2.16	Exposition sketch execution. Detailed development and graphic design of the project. Writing an explanatory note. Exhibition, assessment and discussion of projects.	16	16
	Total for task 2	48	52
	Together in the 2-nd semester	128	142
	3 semester		
	Course project №3 Development of the project of a large spectacular public building. Variants – a drama theater with a hall for 1,000 seats, a concert complex with halls for 1,500 and 500 spectators, a sports complex with a universal sports and demonstration hall (undertaken by the department of architecture of buildings and structures)		
3.1	Issuance of the task. Introductory conversation, familiarization with architectural and technological requirements for demonstration and spectator complexes of premises, etc. Issuance of an essay plan, drafting an essay. Closed work No. 1 "Architectural and planning solution of a large spectacular building", "Architectural and planning solution of a sports complex with a universal sports and demonstration hall."	12	10
3.2	Discussion of closed works. Compilation and submission of an essay. Selection of the site for placing the building. Search for the idea of an architectural and planning solution. Familiarization tour to one of the Odessa theaters.	12	10
3.3	Sketching according to plans, facades, sections, general plan of the site. Approval of sketches.	24	20
3.4	Interior design of one of the main premises of the building. Clarification of the constructive decision. Development of an exposition sketch. Detailed development and graphic design of plans, facades, sections, general site plan.	30	26
3.5	Development and graphic design of perspective images of the building and interiors. Final design of the project. Writing an explanatory note.	14	14
3.6	Final design of the project. Exhibition, assessment and discussion of projects.	4	4
	Together in the 3-rd semester	96	84
	In total in the 1-st, 2-nd and 3-rd semesters	338	337

Scoring criterias and diagnostics methods

The minimum grade level for successful completion of the credit in the academic discipline "Conceptual Architectural Design 1,2,3" is 60 points, the maximum is 100 points, and can be achieved by the following means of assessment:

Means of assessment		Minimum number of scores	Maximum number of scores
Type of control	Number per semester		
PART 1, 1-st semester			
Execution of the essay	1	5	7
Execution of Closed work No. 1 "Enterprise Placement Scheme"	1	5	7
Execution of Closed work No. 2 "Architectural and planning solution of the enterprise"	1	5	9
Execution of Closed work No. 3 "Architectural and planning solution of the administrative and household building"	1	5	7
Writing an explanatory note	1	10	20
Execution of course project	1	30	50
Together		60	100
PART 11, 2-nd semester			
Task 1			
Course project (execution and defense)	1	20	38
Closed works (execution and defense)	3	6	8
Essay (execution and defense)	1	4	5
Working layout (execution)	1	5	5
Participation in research work (report/presentation)	1		4
Total for task 1		36	60
Task 2			
Execution of the essay	1	3	4
Execution of the closed work	1	4	6
Writing an explanatory note	1	3	5
Execution of course project	1	14	25
Total for task 2		24	40
Together		60	100
PART 111, 3-rd semester			
Execution of the essay	1	10	15
Execution of the closed work	1	10	20
Writing an explanatory note	1	10	15
Execution of course project	1	30	50
Together		60	100

References

Basic literature

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2. Методичні вказівки до виконання курсового проекту «Науково-технологічний парк» / Укладач В.І.Вершинін. Одеса. ОДАБА, 2018.
3. Методичні вказівки до виконання курсового проекту «Автоскладальний завод» / Укладачі Харитонов А.А., Іванова І.М. Одеса. ОДАБА, 2021.
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5. Методичні вказівки до виконання курсового проекту «Сміттєпереробний завод» / Укладачі Москалюк О.В., Дмитрієва Т.П., Коренецький О.В., Дмитрік Н.О. Одеса. ОДАБА, 2019.
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7. Методичні вказівки до виконання курсового проекту багатоповерхового житлового будинку/ Укладачі Бельська Н.К., Панкратов В.М. Одеса. ОДАБА, 2021.
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11. ДБН В.2.2-15:2019 Житлові будинки. Основні положення.
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13. ДБН В.2.2-16:2019 Культурно-видовищні та дозвіллеві заклади.
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